Marked up claims for U.S. Serial No. 09/917,376 showing changes

What is claimed is:

1. A composition comprising a substantially purified thermostable AvIII peptide, said AviIII peptide comprising a catalytic domain GH74 and carbohydrate binding domain (CBD) III.

2. The composition of claim 1 wherein the thermostable AviIII peptide is further defined as comprising a linker and a signal sequence.

3. The composition of claim 1 or 2 wherein the GH74 catalytic domain of the thermostable AviIII peptide is further defined as having a length of about 730 to about 760 amino acids.

4. The composition of claim 1, 2, 3, or 4 wherein the carbohydrate binding domain (CBD) III of the thermostable AviIII peptide is further defined as comprising a length of about 80 to about 150 amino acids.

5. The composition of claim 1,2,3 or 4 wherein the carbohydrate binding domain (CBD) III of the thermostable AviIII peptide is further defined as comprising a length of about 90 amino acids.

6. The composition of claim 3 wherein the GH74 catalytic domain is further defined as a sequence of SEQ ID NO: 3.

7. The composition of claim 4 wherein the carbohydrate binding domain (CBD) III is further defined as a sequence of SEQ ID NO: 4.

8. The composition of claim 4 wherein the carbohydrate-binding domain (CBD) III is further defined as comprising the sequence of SEQ ID NO: 5.

9. The composition of claim 1 further defined as comprising a sequence of SEQ ID NO: 3 and SEQ ID NO: 4.

10. The composition of claim 1 further defined as comprising a nucleic acid sequence having about 70% sequence identity to the sequence of SEQ ID NO: 2.

11. The composition of claim 1 further defined as comprising a nucleic acid sequence having about 80% sequence identity to the sequence of SEQ ID NO: 2.

12. A thermostable AviIII peptide having a sequence of SEQ ID NO: 1.

13. The thermostable AviIII peptide of claim 12 further defined as having a sequence of SEQ ID NO: 2.

14. An industrial mixture suitable for degrading cellulose, such mixture comprising the thermostable AviIII polypeptide of claim 1.

15. The industrial mixture of claim 14 further defined as comprising a detergent.

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28. An isolated polypeptide molecule comprising:

a) a sequence of SEQ ID NO: 3;

b) a sequence of SEQ ID NO: 4;

c) a sequence of SEQ ID NO: 5;

d) a sequence of SEQ ID NO: 1 or

e) a sequence of SEQ ID NO: 3; SEQ ID NO:4; and SEQ ID NO: 5; or

f) a sequence having about 70% sequence identity with the sequence of a), b), c), d), or e).

29. The polypeptide molecule of claim 28, having about 90% sequence identity with the sequence of a), b), c), d), e), or f).

30. A fusion protein comprising the polypeptide of claim 28 and a heterologous peptide.

31. The fusion protein of claim 30, wherein the heterologous peptide is a substrate targeting moiety.

32. The fusion protein of claim 30, wherein the heterologous peptide is a peptide tag.

33. The fusion protein of claim 32, wherein the peptide tag is 6-His, thioredoxin, hemaglutinin, GST, or OmpA signal sequence tag.

34. The fusion protein of claim 30, wherein the heterologous peptide is an agent that promotes polypeptide oligomerization.

35. The fusion protein of claim 34, wherein the agent is a leucine zipper.

36. A cellulase-substrate complex comprising the isolated polypeptide molecule of claim 28 bound to cellulose.

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43. A composition comprising the polypeptide molecule of claim 28 and a carrier.

44. An isolated antibody that specifically binds to the polypeptide molecule of claim 28.

45. The antibody of claim 44, wherein the antibody is a polyclonal antibody.

46. The antibody of claim 44, wherein the antibody is a monoclonal antibody.

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